

Bio-efficacy of different insecticides against larval population density of gram pod borer, *Helicoverpa armigera* (Hub.) in chickpea

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ABSTRACT : The bio-efficacy of HaNPV, *Bacillus thuringiensis* var. Kurstaki, NSKE, Endosulfan, Profenophos and Methomyl individually was evaluated in chickpea against *Helicoverpa armigera* (Hub.) during *rabi* season 2010- 11and 2011-12. The chickpea crop was sprayed three times (population count after 3, 7 and 14 days) with the respective insecticide when the pest population exceeded the economic threshold level (ETL). Among the different bio-pesticides and synthetic insecticides tested, HaNPV 400 LE/ha, *Bacillus thuringiensis* var. Kurstaki 1.5 kg/ha, NSKE 5%, Endosulfan 0.07%, Profenophos 0.04% and Methomyl 0.08% alone where significantly superior over rest of the treatment in controlling of the larval population, reduction of pod damage. In the treatment against larval population of *H. armigera* give the superior result as the Endosulfan> Profenophos> Methomyl> HaNPV> Biobit> *Bacillus thuringiensis* > NSKE during cropping season 2010-11 and 2011-12 on both the variety (Radhey and Awarodhi) and can be recommended the management of this insect pest in chickpea crop.

Key Words: Bio-efficacy, bio-pesticides, chickpea, pod borer (*Helicoverpa armigera*).